

STATEMENT OF FINDINGS

SUBJECT: Norfolk District Corps-DEQ Wetland Mitigation Recommendations

I have evaluated, in light of the overall public interest, all available information pertaining to the joint Norfolk District Corps of Engineers Regulatory Branch and Virginia Department of Environmental Quality Wetland Mitigation Recommendations. These recommendations define wetland restoration, enhancement, and preservation, provide guidelines for wetland mitigation site selection and design, and include sample permit conditions, monitoring criteria, sample restrictive covenants for protecting mitigation sites in perpetuity, examples for estimating necessary financial assurances, and technical references.

The following summarizes my evaluation, which reflects the national concern for both the protection and utilization of important resources and demonstrates that I have balanced the reasonably foreseeable benefits against the reasonably foreseeable detriments of the proposed wetland mitigation recommendations.

Background

In 1995, the Regulatory Branch of Norfolk District Corps of Engineers developed “*Branch Guidance for Wetlands Compensation, Permit Conditions and Performance Criteria*” (the “1995 mitigation guidelines”) that are used as permit conditions for individual Department of the Army Permits requiring wetland compensatory mitigation. These 1995 mitigation guidelines were intended to be flexible, allowing Regulatory Branch staff to modify these guidelines to address site-specific conditions.

The public raised concerns that the Corps’ use of the 1995 mitigation guidelines was inflexible. For instance, some suggested that the Corps always required the use of bare root material to establish woody wetland species and was unwilling to consider other vegetation alternatives, such as natural regeneration, direct seeding, use of containerized stock, or ball-and-burlap plant materials to establish wetland vegetation.

In 2000, the Regulatory Branch began to reexamine and update the 1995 mitigation guidelines with the intent of annotating those guidelines to depict the range of variability/flexibility that was possible. A number of wetland restoration and creation sites were reviewed to identify successful mitigation practices. The objectives of this effort were to incorporate:

- 1) Literature related to wetland restoration/creation that had been published since 1995;
- 2) Staff experience in evaluating wetland mitigation sites that had been initiated since 1995;
- 3) The best professional judgement of staff and private sector practitioners of wetland restoration/creation in Virginia;
- 4) The professional opinions of members of academia involved in evaluating wetland restoration/creation activities in Virginia; and
- 5) Develop a set of wetland mitigation guidelines or recommendations that would be adopted by the Norfolk District Corps of Engineers and the Virginia Department of Environmental Quality

so that permittees in Virginia would only need to comply with 1 set of wetland mitigation guidelines.

The 1995 mitigation guidelines were revised several times and annotated to incorporate the views of staff, Counsel, appropriate Federal, state, and local government agencies, state universities, and the consulting community. In December 2003, in accordance with HQ USACE guidance on the National Mitigation Action Plan, a public notice was issued announcing the availability of the resulting “*Norfolk District Corps-DEQ Wetland Mitigation Recommendations*” for review and comment. The public notice was issued for 45 days because the comment period fell over the December-January holiday period. The public notice included a fully annotated version of the fourth revision, an unannotated version, and a 2-page wetland mitigation design checklist.

Public Comments

Comments were received in response to the public notice from Dr. Lee Daniels (professor of Soils and Crop Science, VA Tech), Dr. Richard Whittecar (Hydrogeologist, Old Dominion University), Dr. James Perry (Ecologist, Virginia Institute of Marine Science), Dr. Rob Atkinson (Ecologist, Christopher Newport University), the Virginia Department of Transportation (VDOT), Virginia Department of Conservation and Recreation, Department of Environmental Quality, National Marine Fisheries Service, U.S. Fish and Wildlife Service, EPA Region III, and from several private consulting firms: Vanasse, Hangen & Brustlin (VHB), Wetland Studies and Solutions (WSS), Malcolm Pirnie, Dewberry and Davis, and KCI. Most of their suggestions were incorporated directly into these wetland mitigation recommendations. Their comments pertained to the following portions of the wetland mitigation recommendations: definitions; necessary information for site design; sample permit conditions; monitoring report criteria; and references.

We received no objections to the proposed “*Norfolk District Corps-DEQ Wetland Mitigation Recommendations*”. The recommendations and suggestions received in response to the December 2003 public notice were incorporated in a final revision of the “*Norfolk District Corps-DEQ Wetland Mitigation Recommendations*”, unless noted otherwise below.

Definitions

Dewberry and Davis suggested that incentives should be provided in order to encourage wetland enhancement. While we generally agree, incentives should be considered on a project specific basis and are not appropriate for inclusion in a broad set of wetland mitigation recommendations. Dewberry and Davis also suggested indicating whether wetland preservation would constitute a gain in wetland acreage or provide mitigation credit. Assignment of mitigation credit is typically done on a case-by-case basis as determined by the project manager and is not appropriate for broad mitigation recommendations. Norfolk District typically requires a 1:1 wetlands restoration/creation ratio (or mitigation ratio) for impacts to emergent wetlands, a 1.5:1 mitigation ratio for impacts to scrub-shrub wetlands; a 2:1 mitigation ratio for forested wetland impacts; and between 10:1 to 20:1 preservation ratio for wetlands.

Necessary Information for Site Design

VDOT expressed concern about the feasibility of placing enough coarse woody debris on site to cover 1-2% of the mitigation site. This suggested treatment was included at the request of several commenters. However, it is a suggestion not a requirement. The use of woody debris on a mitigation site will be determined on a case-by-case basis in consultation with VDOT.

Sample Permit Conditions

VDOT questioned the value of a boundary survey of the planned wetlands once grading was completed (permit condition # 4) and recommended its deletion. The condition was written because a number of mitigation sites were found at the time of completion of monitoring to be smaller than the associated permits required. This condition was retained in the mitigation recommendations.

VDOT also recommended substantial modifications of condition # 5, which is related to description of wetland creation area soils prior to and after completion of grading. This condition documents the development of hydric soil conditions in wetland creation areas and is based upon the recommendations of earlier commenters. We believe it is important to document the formation of hydric soils or hydric soil conditions in wetland creation areas and are retaining this condition without modification.

WSS objected to permit condition # 7, which states that unless given written approval by the Corps and DEQ, a mitigation site shall not be planted until it demonstrates wetland hydrology for 12.5% of the growing season (measured in consecutive days). WSS indicated that this permit condition would delay planting of a mitigation site by 1 year and felt that it was ecologically unsupportable. This permit condition was part of the Norfolk District 1995 mitigation guidelines. Without this condition, mitigation sites are often planted before wetland hydrology has been demonstrated. It can be more difficult to get the permittee to correct problematic hydrology once the mitigation site has been planted. In light of our experience, we retained this condition. The mitigation recommendations allow the Corps and DEQ to grant an exception to it.

VDOT stated that permit condition # 8 (use of wetland seed mixes free of noxious or allelopathic species as well as species on Department of Conservation and Recreation's Invasive Alien Plant List) is unenforceable and should be deleted. This condition was developed after consultation with DCR. This condition was retained. Several seed suppliers have provided seed mixes for mitigation sites; and at least 1 operational mitigation bank has complied with this requirement.

WSS and VDOT suggested that mitigation sites meet the wetland hydrology criterion if water is within 12 inches of the surface for between 5 and 12.5% of the growing season and corroborative indicators (blackened leaves, oxidized root channels, FAC Neutral test, etc.) are present. The Regulatory Branch believes that successful creation/restoration of wetlands can be problematic for these drier wetlands (water within 12 inches of the surface for between 5 and 12.5% of the growing season). Our experience has shown that most wetlands in our District have soils that are inundated or saturated within 12 inches of the surface for more than 12.5% of the growing season. Mitigation sites that initially have water within 12 inches of the surface for between 5

and 12.5% of the growing season initial might not satisfy wetland hydrology as the vegetation matures and transpiration rates increase. In light of this argument, the 12.5% provision was retained.

WSS requested that the vegetation success criteria specify a single number of woody stems/acre to be planted rather than a range (200-400 woody stems/acre). WSS expressed concern that it is being required to satisfy higher numerical requirements than its competitors. This condition was retained to ensure that a Corps or DEQ project manager has flexibility to require plantings that are based on site-specific conditions. However, differences in planting requirements are site-specific and related to the objectives associated with the mitigation site.

VDOT expressed concern over the wording of permit condition #18 (pre-construction meeting) contending it might adversely affect project budgets and construction schedules, but did not provide any specific suggestions for modification. We have found pre-construction meetings for mitigation projects to be very useful and have retained this condition in its original form. The Corps and/or DEQ can choose to leave this condition out of a permit on a case by case basis.

VDOT expressed concern about the definition of “wetland professional” in condition #20. This phrase has been left undefined. The Corps/DEQ currently accept any individual working in the field with appropriate training as a “wetland professional”. The term also includes those individuals certified by the Society of Wetland Scientists and those certified by the Commonwealth of Virginia as Wetland Delineators.

VDOT also expressed concern that condition #21 leaves a blank space rather than specifying how long after grading the permittee shall be responsible for remedial actions. This was deliberate, to allow different dates to be placed depending upon the type of wetland mitigation sought (i.e. tidal emergent, non-tidal scrub-shrub, non-tidal forested). The intent is for remedial actions to be required for the length of the monitoring period.

VDOT objected to the requirement for a final monitoring report (condition #23). It states that many aspects of the final mitigation monitoring report, including the final functional assessment of the mitigation site should be the responsibility of the regulatory agencies. These mitigation sites are proposed by the permittee to offset unavoidable project wetland impacts and it is incumbent upon the permittee to demonstrate that this requirement has been met. The final monitoring report provides evidence of compliance with those mitigation requirements.

VHB suggested that condition #23 specify a functional assessment methodology, that without it, the results will be too broad. This condition does allow for the use of several assessment methodologies, including professional judgment. We do agree that reports should specify physiographic province and wetland type to facilitate future analysis. We have modified this condition accordingly, however, until one or more standard methodologies for functional assessment are adopted, we believe that the permittee should be afforded the option to use any accepted assessment methodology.

Monitoring Report Criteria

VDOT objected to the recommendation that 4 photographs be provided from each ordinal direction around each monitoring well. VDOT contended that many regulators found these photographs to be unnecessary. This condition was revised to allow as an alternative to ground photos the submittal of “a true color or infrared aerial photograph (8" x 10" or larger) depicting the entire site. An aerial photograph should be taken during the growing season and once the site has been graded, planted, and stabilized (preferably in the 3rd or 5th year following final grading).”

VDOT and WSS both felt too many monitoring wells were required on mitigation sites and that the original formula insured that larger sites would have fewer monitoring wells. Both also noted that fewer wells per acre were required for larger mitigation sites. We have reapportioned well requirements to be more equitable. However, we still require fewer wells per acre for larger sites, in part as an incentive for restoration/creation of wetlands on larger sites. We believe that the revised specifications address the concerns of VDOT and WSS.

WSS felt too many vegetation plots were required on mitigation sites and that the original formula insured that larger sites would have fewer sample plots and that fewer plots per acre were required for larger mitigation sites. We have reapportioned sample plot requirements to require fewer sample plots per acre for larger sites, in part as an incentive for restoration/creation of wetlands on larger sites.

No other comments on this project were received from any other local, state, or federal agencies or members of the public.

FOR AND IN BEHALF OF THE DISTRICT ENGINEER,
COLONEL YVONNE J.PRETTYMAN-BECK:

Date

J. Robert Hume, III
Chief, Regulatory Branch